



## **IPR Notice**

All rights, titles and interests contained in this information, texts, images, figures, tables or other files herein, including, but not limited to, its ownership and the intellectual property rights, are reserved to eMemory. This information may contain privileged and confidential information. Some contents in this information can be found in Logic Non-Volatile Memory (The NVM solutions from eMemory), published in 2014. Any and all information provided herein shall not be disclosed, copied, distributed, reproduced or used in whole or in part without prior written permission of eMemory Technology Inc.

eMemory, NeoBit, NeoFuse, NeoEE, NeoMTP, NeoROM, EcoBit and NeoPUF are all trademarks and/or service marks of eMemory in Taiwan and/or in other countries.



## **Cautionary Statement**

This presentation contains forward-looking statements, which are subject to risk factors associated with semiconductor and intellectual property business. It is believed that the expectations reflected in these statements are reasonable. But they may be affected by a variety of variables, many of which are beyond our control. These variables could cause actual results or trends to differ materially which include, but are not limited to: wafer price fluctuation, actual demand, rapid technology change, delays or failures of customers' tape-outs into wafer production, our ability to negotiate, monitor and enforce agreements for the determination and payment of royalties, any bug or fault in our technology which leads to significant damage to our technology and reputation, actual or potential litigation, semiconductor industry cycle and general economic conditions. Except as required by law, eMemory undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.



## **Contents**

- 1 Review of Operations
- 2 Future Outlook
- 3 PUF Technology on National Security
- 4 Q&A
- 5 Appendix

# Review of Operations



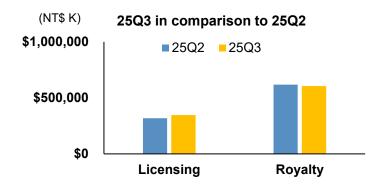
## Q3 2025 Financial Results

(thousands of NT dollars)

,								
	Q3 2025	Q2 2025	QoQ	Q3 2024	YoY	Q1-Q3 2025	Q1-Q3 2024	YoY
Revenue	952,422	936,535	1.7%	899,477	5.9%	2,800,691	2,595,251	7.9%
Gross Margin	100%	100%	-	100%	-	100%	100%	-
Operating Expenses	404,068	390,644	3.4%	394,561	2.4%	1,184,099	1,174,533	0.8%
Operating Income	548,354	545,891	0.5%	504,916	8.6%	1,616,592	1,420,718	13.8%
Operating Margin	57.6%	58.3%	-0.7ppt	56.1%	1.5ppts	57.7%	54.7%	3.0ppts
*Net Income	487,135	399,995	21.8%	413,969	17.7%	1,348,836	1,319,642	2.2%
Net Margin	51.3%	42.5%	8.8ppts	45.5%	5.8ppts	47.9%	50.3%	-2.4ppts
EPS (NT\$)	6.52	5.36	21.6%	5.54	17.7%	18.06	17.68	2.1%
ROE	57.0%	50.4%	6.6ppts	54.6%	2.4ppts	52.6%	58.0%	-5.4ppts

<sup>\*</sup>Net income attributable to Shareholders of the Company

### Revenue across Different Streams





NT\$ Thousands	Q3 2025	Q2 2025	QoQ	Q3 2024	YoY	Q1-Q3 2025	Q1-Q3 2024	YoY
Licensing	347,011	317,976	9.1%	290,639	19.4%	905,204	818,679	10.6%
Royalty	605,411	618,559	-2.1%	608,838	-0.6%	1,895,487	1,776,572	6.7%
Total	952,422	936,535	1.7%	899,477	5.9%	2,800,691	2,595,251	7.9%

US\$ Thousands	Q3 2025	Q2 2025	QoQ	Q3 2024	YoY	Q1-Q3 2025	Q1-Q3 2024	YoY
Licensing	11,546	10,274	12.4%	9,019	28.0%	29,167	25,665	13.6%
Royalty	20,596	19,440	5.9%	18,714	10.1%	60,422	55,468	8.9%
Total	32,142	29,714	8.2%	27,733	15.9%	89,589	81,133	10.4%

## Revenue by **Technology**

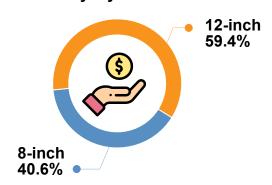
(thousands of NT dollars)

		Q3 2025									
Technology	Total Revenue		Lice	nsing Reve	enue	Royalty Revenue					
Teermology	% of Q3 Revenue	QoQ	YoY	% of Q3 Licensing	QoQ	YoY	% of Q3 Royalty	QoQ	YoY		
NeoBit	24.5%	4.6%	-6.1%	23.2%	34.2%	-11.3%	25.3%	-6.2%	-3.1%		
NeoFuse	61.0%	3.4%	11.2%	42.8%	18.4%	70.9%	71.4%	-0.8%	-0.7%		
PUF-Based	5.4%	9.1%	46.2%	14.5%	8.1%	44.1%	0.2%	83.9%	326.9%		
МТР	9.1%	-17.3%	-7.2%	19.5%	-21.3%	-13.3%	3.1%	0.9%	24.8%		

			Q1-Q3	2025			
Technology	Total Ro	Total Revenue		Revenue	Royalty Revenue		
recimiology	% of Revenue	YoY	% of Licensing	YoY	% of Royalty	YoY	
NeoBit	24.4%	2.1%	21.8%	-7.1%	25.7%	6.3%	
NeoFuse	62.3%	10.6%	43.3%	27.7%	71.5%	6.5%	
PUF-Based	4.2%	27.6%	12.6%	25.7%	0.1%	337.0%	
МТР	9.1%	-0.4%	22.3%	-3.3%	2.7%	13.0%	

## Royalty Revenue by Wafer Size

#### **Q3 Royalty Breakdown**



- 8-inch wafers contributed 40.6% of royalty, down 0.6% sequentially and down 1.4% yearly.
- 12-inch wafers contributed 59.4% of royalty, down 3.1% sequentially but flat compared to last year.

Mofor Cino		Q3 2025	Q1-Q3 2025		
Wafer Size	% of Royalty	QoQ	YoY	% of Royalty	YoY
8-Inch	40.6%	-0.6%	-1.4%	41.1%	4.2%
12-Inch	59.4%	-3.1%	0.0%	58.9%	8.5%

## Future Outlook



### **Future** Outlook

### Licensing & Royalty:

- Licensing growth will be driven by:
  - 10 years contract including 18 3nm tape outs for US defense applications and 3nm CPU for Al server will drive strong PUF security license growth.
  - Strong licenses for embedded ReRAM and NeoFlash technologies that replace external memories.
- **Royalty** growth is expected to accelerate due to customers' tape outs moving into mass production for:
  - RF chips for a leading U.S. smartphone customer's in-house modem module.
  - DDR5-related applications for a major Korean memory manufacturer.
  - Al servers featuring secure BMCs, SSD controllers, and networking chips.
  - Automotive applications in ADAS, networking.
  - Secure embedded controllers for PC/ NB.
  - ASIC applications from various customers.

### **Future** Outlook

#### **New IP Technology & Business Development:**

#### New IP Technologies:

- OTP: Continuing joint development with TSMC on 2nm technologies and IPs.
- ReRAM: Co-developing FinFET technologies and IPs with Korea's largest company.
- NeoFlash: Collaborating with multiple foundries to develop BCD process technologies and IPs at various nodes.
- Security: Accelerating the development of security server hardware and software for Security-as-a-Service.

#### Regarding the business development platforms:

- Jointly developing end-to-end chiplet security solutions with multiple partners to ensure chiplet supply chain protection. The main collaborations focus on supply chain security and chip authentication, ensuring that every chip's role can be securely verified locally.
- Collaborating with Arm to develop PUF-based Security Root of Trust to enhance the security capabilities of Arm's Runtime Security Engine.
- Working with automotive system suppliers and hospitals to provide a PUF-based HSM server platform for OTA software protection and DID-based personal privacy protection.





## **PUF: The Foundation of National Security**

- Modern defense systems rely on global multi-tier supply chains
  - a single counterfeit or tampered chip can compromise a weapon system or entire network

- >>> create a unique and unforgeable hardware identity for every chip
- provide a hardware root-of-trust, enabling secure verification, key generation, and device authentication
- turn each chip, drone, radio, or satellite into a trusted and traceable element of the mission system

## What Applications in Defense Are Using PUF?

Supply Chain Level

### Supply Chain Assurance (verify origin and traceability)

- Anti-Counterfeiting for Military Electronics
- Supply Chain Security

**System Level** 

### System-Level Security (ensure trusted operation)

- Secure Boot & Firmware Integrity
- IoT & Sensor Network Security

**Device Level** 

### **Device-Level Protection (secure the hardware itself)**

- Device Authentication & Identification
- Secure Key Generation

## Applying PUF to Supply Chain Management for Defense



Use PUF-based ID to authenticate each module

Detect counterfeits or altered components



Continuous attestation via PUF-based HSM

Verify runtime integrity and firmware authenticity

Design & Fabrication

Assembly & Testing

Logistics & Deployment

Operation & Maintenance

Embed PUF IP for unique chip

Guarantee authenticity at silicon level



Link shipments to PUF-signed digital certificates

Prevent supply-chain swaps or fake deliveries





## **NeoPUF: Excels in National Defense**

- Deliver proven reliability and radiation strength
  - securing every chip, every mission, every supply chain



01

### **Reliable in Any Condition**

Stay stable and accurate even in extreme heat, cold, or noise.

02

#### **Radiation-Resistant**

Unlike SRAM, its gate-oxide quantum tunneling mechanism prevents space-radiation effects from disrupting stability

03

### **Tamper-Proof & Unclonable**

Its physical structure can't be flipped or copied, making hacking or cloning nearly impossible.

04

### **Adaptable Across the Defense Ecosystem**

Deployed across multiple domains such as communication, surveillance, and aerospace, ensuring consistent hardware trust foundation.



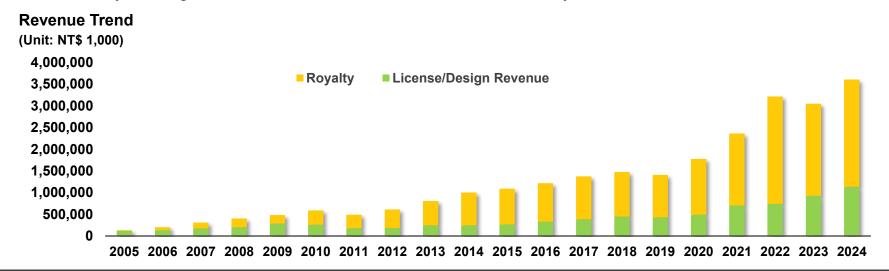
Q&A

## Appendix



## **Company Overview**

eMemory is the global leader of embedded non-volatile memory IP



## Founded

Based in Hsinchu, Taiwan. IPO in 2011. Over 72M wafers shipped.

1330+

### **Patents Issued**

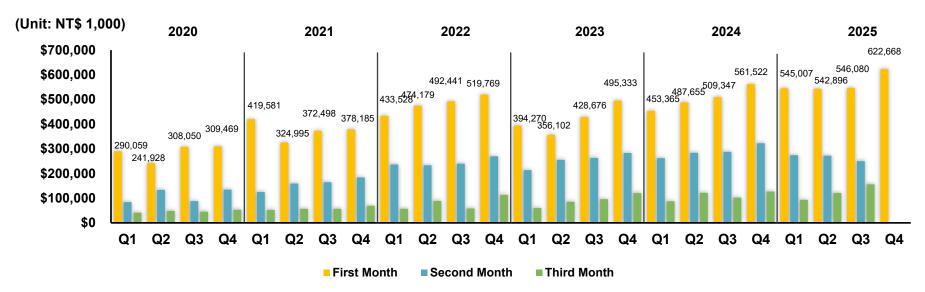
205 pending patents. 346 employees with 72% R&D personnel.

## Best IP Partner

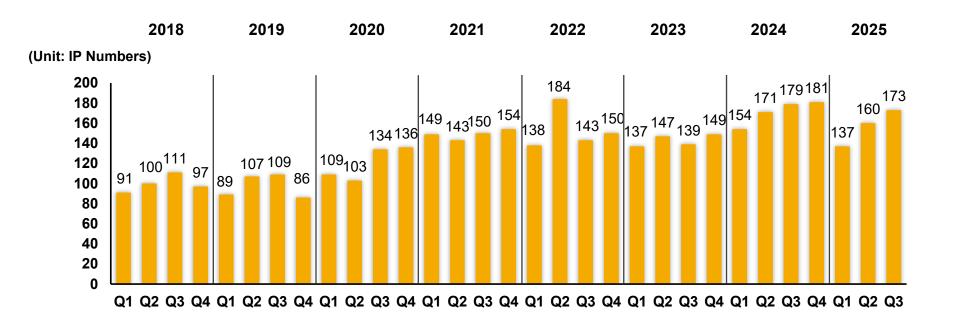
TSMC Best IP Partner Award since 2010.

## Quarterly Revenue Pattern

- 1st month: Receive License Fees of the month and Royalty from most foundries on previous quarter's wafer shipments.
- 2<sup>nd</sup> month: Receive License Fees of the month and Royalty from other foundries.
- 3<sup>rd</sup> month: License Fees Only.



## Quarterly Number of New Tape-outs



### **Worldwide Customers**

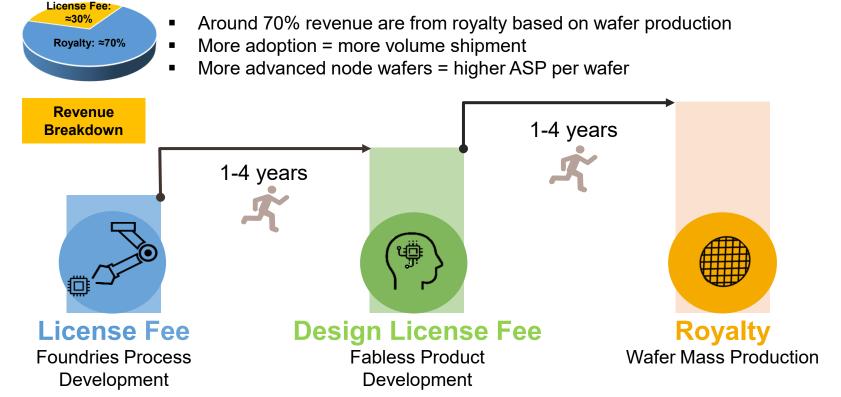
Our IP solutions are adopted by leading foundries, IDMs and fabless worldwide

Country	Foundry	IDM	Fabless		
Taiwan	4	1	350		
China	12	0	1361		
Korea	4	0	103		
Japan	1	9	88		
North America	2	2	368		
Europe	2	2	237		
Others	1	0	127		



### **Business Model**

Recurring royalty is the backbone of our business

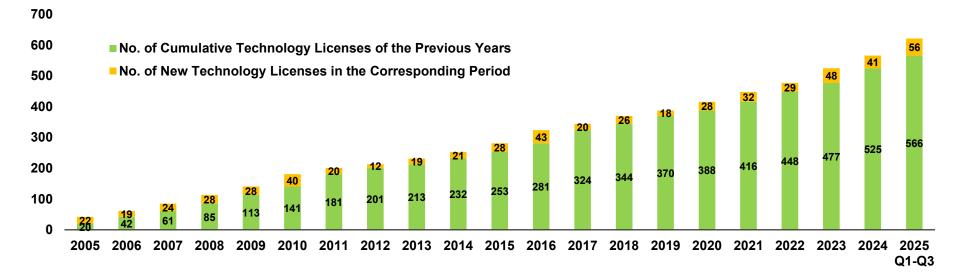


## Technology Licenses

#### **Number of Licenses**

Year	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 Q1-Q3
License	43	20	26	18	28	32	29	48	41	56

Note: Terms (including number of process platforms and licensing fees) for each technology license are set contractually. Payments are made according to set milestones, and there are no particular seasonal factors involved.



## **New Technology** Under Development

- New technologies are being developed for 202 platforms by Q3 2025.
- 22 licensing contracts were signed.

Technology	2nm	3nm	4/5nm	6/7nm	12/16/ 17nm	22/28nm	40nm	55/65nm	80/90nm	0.11/ 0.13um	0.15~ 0.18um	>0.25um
NeoBit	-	-	-	-	-	-	-	1	2	14	11	3
NeoFuse	2	2	1	1	5	24	9	15	8	7	1	-
PUF-Based	-	1	1	1	1	2	-	1	-	1	-	-
МТР	-	-	-	-	1	2	4	12	14	20	35	-

Note: As of September 30th, 2025

## **Technology Development**

Developments by process nodes

12" Fabs	Production	Development	IP Type	Process Type
2nm	0	2	OTP	Nanosheet
3nm	2	3	OTP, PUF	FF, FFP
4/5nm	6	2	OTP, PUF	FF, FF-Auto
6/7nm	4	2	OTP, PUF	FF, FF+
12/16/17nm	16	7	OTP, PUF, MTP	FF, FF+, FFC. FFC+, LPP, DRAM, HV
22/28nm	66	28	OTP, PUF, MTP	LP/ULP/ULL, HPC/HPC+, HV-OLED, DRAM, SOI, RRAM, MRAM, E-Flash, BCD, WoW
40nm	30	13	OTP, PUF, MTP	LP/ULP, E-Flash, HV-DDI/OLED,ReRAM, BCD+
55/65nm	63	29	OTP, PUF, MTP	LP/ULP, E-Flash, HV-DDI/OLED, DRAM, CIS, BCD, PM
80/90nm	35	20	OTP, MTP	HV-DDI/OLED, LP,Generic ,BCD, CIS
0.11/0.13um	27	8	OTP, MTP	HV-DDI, BCD, Generic
0.15/0.18um	15	16	OTP, MTP	BCD, Generic
Total	264	130		

8" Fabs	Production	Development	IP Type	Process Type
80/90nm	9	4	OTP, MTP	HV-DDI, LL, BCD
0.11/0.13um	90	34	OTP, PUF, MTP	HV/HV-MR, BCD, LP/LL, CIS, Green, Flash, SOI, Generic, BiCMOS
0.152/0.16/0.18um	259	31	OTP, MTP	HV/HV-MR, BCD, LP/LL, CIS, Green, Generic
0.25um	42	2	ОТР	BCD
0.3/0.35um	53	0	OTP, MTP	UHV, BCD
0.4/0.5um	11	1	ОТР	UHV, BCD
Total	464	72		

Note: As of September 30th, 2025



### **Embedded Wisely, Embedded Widely**

For more information, please visit:

eMemory Website: <a href="https://www.ememory.com.tw/">https://www.ememory.com.tw/</a>
PUFsecurity Website: <a href="https://www.pufsecurity.com/">https://www.pufsecurity.com/</a>

